

**FILED**

DEC 16 2010

IN THE UNITED STATES DISTRICT COURT

FOR THE WESTERN DISTRICT OF TEXAS

WACO DIVISION

CLERK, U.S. DISTRICT COURT  
WESTERN DISTRICT OF TEXAS  
BY                      DEPUTY CLERK

**GREGORY SCOTT JOHNSON**

**Plaintiff,**

v.

**ARKEMA, INC.**

**Defendant.**

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**CIVIL NO. W-09-CV-107**

**REPORT AND RECOMMENDATION  
OF THE UNITED STATES MAGISTRATE JUDGE**

**TO: THE HONORABLE WALTER S. SMITH, JR.,  
UNITED STATES DISTRICT JUDGE**

This Report and Recommendation is submitted to the Court pursuant to 28 U.S.C. § 636(b)(1)(C), Fed. R. Civ. P. 72(b), and Rules 1(f) and 4(f) of Appendix C of the Local Rules of the United States District Court for the Western District of Texas, Local Rules of the United States District Court for the Western District of Texas, Local Rules for the Assignment of Duties to United States Magistrate Judges.

**I. Background**

This case was originally filed on November 3, 2008 in the 60<sup>th</sup> Judicial District Court of Jefferson County, Texas. Subsequently, Defendant, Arkema, Inc. ("Arkema"), removed this case

from Jefferson County to the United States District Court for the Eastern District of Texas, Beaumont Division. On April 30, 2009, this matter was transferred to the Western District of Texas, Waco Division, pursuant to 28 U.S.C. § 1404(a). This is a personal injury lawsuit in which the Plaintiff, Gregory Scott Johnson ("Johnson"), claims that the Defendant Arkema is liable under the theories of negligence and strict liability for defectively manufacturing, designing and marketing a piece of equipment utilized to strengthen glass bottles.

The Plaintiff claims that he was injured while working as a "hot-end mechanic" at the Owens-Illinois, Inc. glass bottle manufacturing plant in Waco, Texas when he inhaled chemicals that were emitted by the Defendant's equipment. During the manufacturing process, glass bottles pass on a conveyor belt under C-4 Hoods which spray a chemical called Certincoat TC-100 ("Certincoat") that strengthens and improves the bottles. Both the C-4 Hoods and Certincoat are manufactured, designed, and marketed by the Defendant Arkema. Certincoat is made up of a chemical known as monobutyltin trichloride ("MBTC") which is an organometallic compound based on tin. Under the elevated temperatures of the C-4 Hoods, MBTC vaporizes and then decomposes when it contacts the glass bottles and the hood. One of the decomposition by-products of MBTC is hydrochloric acid ("HCL").

In early June of 2007, the Plaintiff was told to work near the C-4 Hood where the Certincoat was applied to the bottles. After several hours of working near the C-4 Hood, the Plaintiff experienced shortness of breath and chest pain. Days later, the Plaintiff went to his family physician and was diagnosed with pneumonia. Then, on July 15, 2007, the Plaintiff was again told to work near the C-4 Hoods. After two or three hours, the Plaintiff felt an intense pain in his chest and was taken to the emergency room later that night. After seeking medical

treatment, the Plaintiff was ultimately diagnosed with restrictive lung disease with a loss of approximately 60% of his lung capacity. Also, the Plaintiff asserts that he has interstitial lung disease over approximately 50% of his lungs. Mr. Johnson asserts that these injuries were proximately caused by the inhalation of Certincoat vapors that escaped the C-4 Hoods nearby where he was working.

The suit was originally assigned to the Honorable Walter S. Smith, Jr., United States District Judge for the Western District of Texas, Waco Division; however, it was later assigned to the undersigned for discovery purposes pursuant to 28 U.S.C. § 636(b)(1)(A), (B) and the Local Rules of the United States District Court for the Western District of Texas. On November 17, 2010, the Court held oral argument on Defendant's and Plaintiff's *Daubert* motions. Since this matter was referred to the undersigned solely for discovery purposes, the instant Report and Recommendation will only address the pending *Daubert* motions.

**A. Defendant's Motions**

On September 27, 2010, Defendant filed a Motion to Exclude the Expert Testimony of Dr. Charles J. Grodzin. The basis of Defendant's Motion to Exclude is that Dr. Grodzin's expert testimony is unreliable and would be unhelpful to a jury under *Daubert* and Rule 702 of the Federal Rules of Evidence. Also, on October 15, 2010, Defendant filed a Motion to Exclude the Expert Testimony of Richard B. Schlesinger, Ph.D. and a Motion for Summary Judgment and Brief in Support. In the Motion to Exclude Dr. Schlesinger's expert testimony, Defendant argues that his opinions are not relevant or scientifically reliable. In their Motion for Summary Judgment, Defendant asserts that there are no genuine issues as to any material fact and that they are entitled to judgment as a matter of law.

**B. Plaintiff's Motions**

On October 15, 2010, Plaintiff filed a Motion to Exclude the Expert Testimony of Dr. Robert Aris. The basis of the Plaintiff's Motion to Exclude is that Dr. Aris' expert testimony is unreliable and based on speculation. Specifically, Plaintiff argues that Dr. Aris's methodology ignores medical records, is inconsistent, and largely based on speculation. Also, on October 15, 2010, Plaintiff filed a Partial Motion for Summary Judgment based on allegations that the Defendant did not adequately plead the elements of the affirmative defenses and that there is no evidence to prove the Defendant's affirmative defenses.

**C. Applicable Law**

The admissibility of expert testimony is governed by Federal Rule of Evidence 702, which provides:

if scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in form of an opinion or otherwise, if (1) the testimony is based upon sufficient facts and data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles reliably to the facts of the case.

The United States Supreme Court interpreted Federal Rule of Evidence 702 in *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993). In *Daubert*, the Supreme Court assigned to district court judges the role of "gatekeeper" for the purpose of determining whether proffered scientific testimony is both reliable and relevant. *Id.* at 597. In determining whether the proffered testimony is reliable, the district judge must assess whether the reasoning or methodology underlying the testimony is scientifically valid. *Id.* at 592-93; *see also Curtis v. M & S Petroleum, Inc.*, 174 F.3d 661, 668 (5th Cir. 1999). In order to ascertain whether the

testimony is relevant, the district judge must determine whether the reasoning or methodology can be applied to the specific facts of the case. *Daubert*, 509 U.S. at 592-93.

In determining whether an expert's reasoning or methodology is reliable, the Supreme Court identified several factors for a district judge to consider. *Id.* at 593-94. The factors are: (1) whether the expert's theory can be or has been tested; (2) whether the theory or technique has been subjected to peer review and publication; (3) the known or potential rate of error of a technique or theory when applied; and (4) whether the theory or method has been generally accepted by the scientific community. *Id.* The Supreme Court makes clear that these factors do not constitute a "definitive checklist." *Id.* at 593. In *Khumo Tire Co. v. Carmichael*, the Supreme Court declared that any of the *Daubert* factors could be used to determine reliability, but that the test should be flexibly applied. 526 U.S. 137 (1999).

## **II. Defendant's Motion to Exclude Expert Testimony of Dr. Richard B. Schlesinger**

### **A. Dr. Richard B. Schlesinger's Background and Opinions**

Dr. Richard B. Schlesinger received his B.A. in Biology from Queens College in 1968, his M.S. in Biology from New York University in 1971, and his Ph.D. in Biology and Environmental Health Science from New York University in 1975. *See* Exhibit A, p. 15, to Defendant's Motion to Exclude. Currently, Dr. Schlesinger is the Associate Dean at Dyson College of Arts and Sciences of Pace University in New York City, New York where he is also a professor of Biology and Director of the Graduate Program in Environmental Science. *Id.* at 1. Dr. Schlesinger is also a Fellow of the Academy of Toxicological Sciences, which is a professional peer certification organization. *Id.* Before working for Pace University, Dr. Schlesinger worked at New York University for over twenty years as the Director of the Systemic

Toxicology Program in the Department of Environmental Medicine, NYU School of Medicine and as Director of the NYU Graduate Program in Environmental Health Sciences. *Id.*

Further, Dr. Schlesinger has over thirty years of experience in the field of respiratory toxicology, including the study of the adverse effects of exposure to inhaled chemicals. *Id.* The National Institutes of Health (NIH), the U.S. Environmental Protection Agency (USEPA), the National Institute of Occupational Safety and Health (NIOSH), the Health Effects Institute (HEI), and the Electric Power Research Institute (EPRI) have supported his research. *Id.* at 1-2. He has authored and edited numerous books and journal articles relating to the field of toxicology. *Id.* at 21-30. Also, Dr. Schlesinger is the Associate Editor of the journal, *Inhalation Toxicology*. *Id.* at 2. Dr. Schlesinger has received numerous awards in the field of toxicology and is clearly well versed in the subject matter. *Id.* For purposes of the instant motion, Defendant does not contest Dr. Schlesinger's qualifications as a toxicologist. *See* Defendant's Motion to Exclude at 3 n.1.

On March 25, 2010, Dr. Schlesinger wrote a Preliminary Report on the toxicological aspects of the Plaintiff's chemical exposure on July 15, 2007 and in early June of 2007. *See* Exhibit A, p. 2, to Defendant's Motion to Exclude. Dr. Schlesinger wrote a toxicological evaluation of the relationship between exposure to MBTC and HCL and subsequent adverse biological responses while considering the following factors: 1) what chemical or chemicals were involved in the exposure, 2) what were the exposure concentrations, 3) what was the exposure duration, 4) what are the known toxicological effects of the chemical(s), and 5) are the adverse biological effects manifested by Plaintiff consistent with the above. *Id.* at 2-3.

After reviewing the evidence and his research on the subject, Dr. Schlesinger made his causation opinion while relying on five basic points: 1) the scientific basis for toxicological

cause-effect assessment, 2) the known toxicology of MBTC and HCL, 3) the known biological effects of inhaled respiratory irritants in general, 4) the overall scenario of the exposure episodes, and 5) the symptoms reported by the Plaintiff during these exposures. *Id.* at 10. In sum, Dr. Schlesinger's causation opinion is that Plaintiff encountered "acute inhalation exposures to strong respiratory tract irritants [the chemical toxicological class of MBTC and HCL] which ultimately resulted in the progression of damage to chronic respiratory tract disease (restrictive lung disease) and resultant clinically significant respiratory functional impairment." *Id.* at 10-11. In addition to issuing a preliminary report, Dr. Schlesinger also provided deposition testimony on September 23, 2010. *See* Exhibit B, to Defendant's Motion to Exclude. Finally, Dr. Schlesinger supplemented his opinions by way of an Affidavit dated October 29, 2010. *See* Exhibit 2, to Arkema's Reply Brief in Support of Motion to Exclude Richard Schlesinger.

In his October 29, 2010 Affidavit, Dr. Schlesinger clarifies the following findings made in his March 2010 report:

1. Chemicals having the same or similar mode of action are grouped toxicologically into what is termed a "common mechanism group."
2. MBTC is a member of the chemical class "organotin compounds."
3. Organotin compounds are classified as "strong irritants."
4. HCL is also classified as a "strong irritant."
5. Exposure to strong irritants will affect the mucous membranes at the site of contact, including the respiratory tract, resulting in symptoms including lacrimation, rhinitis, sore throat, cough, wheeze, chest pain or tightness, and shortness of breath.
6. The pathophysiological response to exposure to irritants, including HCL and MBTC, is "nonspecific" i.e., it is production of an inflammatory response on any biological tissue contacted by the chemical.
7. The resulting respiratory tract pathology resulting from such inflammation can range from mild transient hyperemia with some increased interstitial and intraluminal secretions, to edema, to extensive tissue destruction and denudation, depending on the following factors:
  - a. Exposure concentration;



- b. Exposure duration;
- c. Extent of the initial injury;
- d. Site of the injury within the respiratory tract; and
- e. Host susceptibility factors, such as breathing mode (nasal v. oral), presence of any pre-existing injury and overall genetic variability.

8. While the initial acute phase response can resolve with normal tissue regeneration, the inflammatory process often progresses and continues even in the absence of any continuing chemical exposure.

9. The progression of the inflammatory process is known to cause permanent alteration of respiratory tract anatomy and physiology due to the replacement of normal respiratory tract tissue with connective tissue component, and can result in impairment of lung elasticity.

10. Inflammation resulting in development of chronic pathology within the respiratory tract is a known result of acute exposure to inhaled irritants.

11. This pathology may not be evident for days, weeks or months following the exposure.

12. HCL has specifically been shown to cause the disease progression described above.

13. HCL has been shown to cause pulmonary fibrosis in experimental animals.

14. HCL has been shown to affect all regions of the respiratory tract following inhalation, indicating its ability to damage sites throughout the lungs.

15. MBTC has been shown to affect all regions of the respiratory tract following inhalation, indicating its ability to damage sites throughout the lungs.

16. MBTC has been shown to cause lung damage in experimental animals which is similar in severity within a wide concentration range.

17. The OSHA Permissible Exposure Limit for organotin compounds (such as MBTC) is 0.1 mg/m<sup>3</sup> (milligrams per cubic meter).

18. Occupational short-term permissible exposure limits ("TLV-STEL") are set at the maximum allowable acute exposure concentration for a continuous 15-minute period in order to prevent acute respiratory tract and eye irritation. The TLV-STEL for MBTC is 0.2 mg/m<sup>3</sup>.

19. The TLV-STEL for HCL is 5 parts per million (7 mg/m<sup>3</sup>), a concentration noted to be "immediately irritating", with 10 ppm (15mg/m<sup>3</sup>) noted in toxicological literature to be "highly irritating."

20. The National Academy of Sciences sets Acute Exposure Guideline Levels (AEGL) for airborne concentrations of many chemicals. AEGL-2 levels are set at a level above which it is likely that there would be irreversible or other serious long term adverse health impact of exposure. The AEGL-2 for HCL is 43 ppm (64 mg/m<sup>3</sup>) for a 30 minute exposure, 22 ppm (33mg/m<sup>3</sup>) for a 1 hour exposure, and 11 ppm (16 mg/m<sup>3</sup>) for a 4 hour exposure.

21. The joint toxic action of MBTC and HCL is additive. Co-exposure of HCL with other respiratory irritants has been shown to result in additive



biological effects.

22. Johnson's symptoms of burning and tearing of the eyes, burning of throat, shortness of breath, chest pain, coughing, and wheezing are, both in nature and temporal development, consistent with inhalation exposure to irritants.

23. Johnson was exposed to concentrations of MBTC and HCL at levels at which an irritant response was initiated.

24. The concentration of MBTC and HCL Johnson was exposed to exceed the guidelines aimed at protecting exposed individuals from severe and irreversible respiratory tract damage.

25. Johnson's diagnosis of restrictive lung disease is consistent with the known results of inhalation exposure to one or more chemicals classified as strong irritants.

26. The total body of evidence related to the scientific basis for toxicological cause-effect assessment, including the known toxicology of MBTC and HCL, provides scientific support that Johnson underwent acute inhalation exposures to strong respiratory tract irritants which ultimately resulted in the progression of damage to chronic respiratory tract disease (restrictive lung disease) and resulting clinically significant respiratory functional impairment.

*Id.* at 3-4.

Also, in his Affidavit, Dr. Schlesinger provides that Mr. Johnson inhaled at least three toxic chemicals emitted by Arkema's Coating System: MBTC, HCL and tin oxide. *Id.* at 9. Dr. Schlesinger further provides in his Affidavit that:

I have concluded that MBTC and its chemical decomposition products are capable of causing the permanent lung injury suffered by Mr. Johnson. In addition to the specific scientific literature relating to these particular chemicals (discussed below), I base this conclusion upon scientific evidence demonstrating that MBTC and its chemical decomposition products are part of a class of irritants which cause inflammation that can progress to pulmonary fibrosis.

*Id.* at 5. The Court notes that for purposes of this Motion the Plaintiff stipulated at the *Daubert* hearing that Dr. Schlesinger is not offering the opinion that tin oxide causes pulmonary fibrosis.

**B. Analysis of whether Dr. Schlesinger's causation opinion is reliable**

In order to determine the reliability of Dr. Schlesinger's causation opinion, the Court

examines under *Daubert* whether it is generally accepted in the scientific community that exposure to MBTC or HCL causes interstitial lung disease and/or pulmonary fibrosis.

Defendant challenges the reliability of Dr. Schlesinger's causation opinion in this case and alleges that Dr. Schlesinger's causation is inadmissible because it is not based on scientifically reliable evidence or a scientifically reliable methodology. Specifically, Defendant points out that Dr. Schlesinger's opinion as to cause is not generally accepted in the scientific community and has not been subject to peer review or publication, nor has the opinion been supported by scientifically reliable studies. In response, Plaintiff claims: 1) there exists a temporal connection between his exposure and resulting injury which support Dr. Schlesinger's conclusions, 2) MBTC and HCL are part of a "class of chemicals" causing inflammation that can lead to fibrosis, and 3) MBTC and HCL are known to cause the type of lung injury suffered by Plaintiff.

### **1. Application of *Daubert* factors**

Having carefully reviewed all exhibits and considering the arguments of both parties, the Court finds that Plaintiff's position is unpersuasive in that it has never been tested, never been submitted for peer review, and is not generally accepted within the scientific community. The Court will explain its analysis and address the Plaintiff's positions below.

The first factor identified by *Daubert* in determining the reliability of an expert's opinion is whether the expert's theory can be or has been tested. *Daubert*, 509 U.S. at 593. As is evident from the deposition testimony of Dr. Schlesinger, his theory that exposure to MBTC or its decomposition byproduct, HCL, causes interstitial lung disease and/or pulmonary fibrosis has not been tested either by a controlled human study or epidemiological study. On this issue, Dr. Schlesinger testified as follows:

Q. Are there any epidemiological studies relating to human exposure to MBTC?

A. There aren't any.

Exhibit B ("Schlesinger depo"), to Arkema's Motion to Exclude at 196.

\* \* \*

Q. Did you review any human study that concluded that there's a statistically significant link between exposure to hydrochloric acid and the development of restrictive lung disease?

A. There are no such studies in the literature.

Q. Are there any such studies identifying a significant link between exposure to MBTC and the development of restrictive lung disease?

A. Those studies do not exist in the literature.

Q. And so you're not aware of any epidemiological studies relating to the effect of hydrochloric acid on humans, are you?

A. No.

Q. Did you rely on any or review any controlled human studies relating to MBTC?

A. There aren't any.

*Id.* at 197-98.

\* \* \*

Q. Did you review any case report where a human being was exposed to hydrochloric acid and later developed restrictive lung disease?

A. No.

*Id.* at 226.

The Plaintiff and Dr. Schlesinger, however, contend that animal studies exist that support the Plaintiff's position. First, as to MBTC, Plaintiff relies on an *unpublished* study entitled "A Four-Week Inhalation Toxicity Study with Monobutyltin Trichloride in the Rat with A Recovery Period" issued in 1988 by Bio/dynamics at the request of Defendant (*emphasis supplied*). Exhibit 49, to Plaintiff's response to Arkema's Motion to Exclude. The study was designed to assess the toxic effects of MBTC when administered by inhalation to rats for six hours per day, five days per week, for four weeks at target concentrations of 1, 10, and 30 milligrams per cubic

meter. *Id.* at Exhibit 49(B). The conclusion of the study was that exposure to MBTC did cause some effects to the lung tissue of the rats. *Id.* Specifically, the report provides that:

Grossly, the incidence of lung discoloration was increased in exposed males and females. Microscopically, amorphous material, (perhaps the test material or monobutyltin dihydroxy chloride, the hydrolysis product of monobutyltin trichloride) and alveolar edema were evident in the lungs of exposed males and females. Other lung changes which occurred with increased incidence and severity in the exposed groups included peribronchial lymphoid cell accumulation and perivascular lymphoid cell infiltrate, extravasated erythrocytes (males only), and accumulation of alveolar macrophages. Dose related responses were shown only by alveolar edema in both sexes and by alveolar erythrocytes in males only.

*Id.*

In evaluating testing relied on by experts in toxic tort cases, the Fifth Circuit has provided that “[u]ndoubtedly, the most useful and conclusive type of evidence in a case such as this is epidemiological studies.” *Allen v. Penn. Eng’g Corp.*, 102 F. 3d 194, 197 (5<sup>th</sup> Cir. 1996) *citing* *Brock v. Merrill-Dow Pharmaceuticals, Inc.*, 874 F. 2d 307, 311 (5<sup>th</sup> Cir. 1989), *modified by* 884 F. 2d 166 (5<sup>th</sup> Cir. 1989), *cert. den.*, 494 U.S. 1046 (1990). Further, the Fifth Circuit has “frowned upon causative conclusions bereft of statistically significant epidemiological evidence.” *Wells v. SmithKline Beecham Corp.*, 601 F.3d 375, 380, *citing* *Burleson v. Tex. Dept. of Criminal Justice*, 393 F.3d 577, 586 (5<sup>th</sup> Cir. 2004). After recognizing the significance of epidemiological studies, the Fifth Circuit in *Allen* “noted the very limited usefulness of animal studies when confronted with issues of toxicity.” *Allen*, 102 F. 3d at 197. According to *Allen*, studies of the effects of chemicals must be carefully qualified in order to have explanatory potential for human beings. *Id.* In other words, in order for an animal study to have any indicia of reliability in a toxic tort case, it must be demonstrated as being relevant to the case in which it is being utilized. *See id.*

In the instant case, the Court is of the opinion that Plaintiff's MBTC rat study should not be recognized as reliable evidence because Dr. Schlesinger has failed to demonstrate its relevance to the case at bar. In support of this finding, the Court relies upon the deposition testimony of Dr. Schlesinger. Concerning the relevance of the rat study, Dr. Schlesinger testified as follows:

Q. Have you attempted to correlate at all the duration of the exposure in the animal study that you're referring to on MBTC to Mr. Johnson's alleged exposure?

A. Well, Mr. Johnson's was one or two acute exposures, and the animal study was a repeated exposure study.

Q. So have you attempted to make a correlation at all between those two durations of exposure?

A. Well, *there is no correlation between the durations of exposure*. I looked at it from the—from the point of view of what the biological effects were of the MBTC given that there are hardly any data—well, basically no data in the literature on inhaled MBTC in animals or humans.

Q. Have you attempted to make any correlation between the concentration that the animals were exposed to and the concentration that Mr. Johnson may have been exposed to?

A. Well, based on Mr. Lauderdale's estimates of 10 to 50 milligrams per cubic meter—the animals were exposed to 1 to 30 milligrams per cubic meter. So on a concentration-to-concentration basis, they're related to each other, but there are—you have to be able to relate—extrapolate from the rats what's being—what the exposure level would be to a human at the rat level.

Q. And have you attempted to do that?

A. No.

Schlesinger depo at 212-13 (*emphasis supplied*).

\* \* \*

Q. So is there any way for you to make a correlation between the animals, who were exposed to a steady dose for a lengthy period of time, and Mr. Johnson, who was exposed to a peak dose, which is the only number we have, for possibility a short period of time. Can you make that correlation at all?

A. The only correlation—correlation of—of what? Exposure scenario?

Q. Yes

A. No, *the exposure scenarios are different*.

*Id.* at 213-14.

In that Dr. Schlesinger concedes there is no correlation between the duration and length of exposure between the rat study and Mr. Johnson's exposure, the Court concludes that the rat study is neither reliable nor relevant.

The second animal study relied upon by Plaintiff for the proposition that exposure to hydrochloric acid causes pulmonary fibrosis is a 1993 study entitled, "*A Study on the Acute and Long-Term Effects of Hydrogen Chloride on Respiratory Response and Pulmonary Function and Morphology in the Baboon*," published by the "Journal of Fire Sciences." Exhibit 54, to Plaintiff's Response to Arkema's Motion to Exclude. The purpose of the study was to investigate the effects of HCL on the respiratory system of a baboon, an animal species alleged to be a surrogate of man. *Id.* at 461. The methodology of the study consisted of exposing nine baboons individually for fifteen minutes to three concentrations (500 ppm, 5000ppm, and 10,000 ppm) of HCL for a one year period. *Id.* at 461-62. The conclusion of the study was that inhalation of HCL by the baboon did not result in "the development of impaired respiratory/pulmonary function, except at the highest concentration." *Id.* at 480. The only "significant finding" from the study was the development of fibrosis in one baboon at a 10,000 ppm exposure level. *Id.* at 481.

Again, the Court is likewise of the opinion that the Plaintiff's HCL baboon study should not be recognized as reliable evidence because he has not demonstrated its relevance to the instant case. Dr. Schlesinger's testimony regarding the baboon study is dispositive of the lack of relevance of the proffered study:

Q. Are there differences between baboons and humans in terms of their –the

structure of their respiratory tract?

A. Yeah, humans are pretty unique in terms of the geometry of their respiratory tract.

Schlesinger depo at 223.

\* \* \*

Q. Have you done anything at all to correlate that particular study to Mr. Johnson's claimed exposure at all?

A. *No, no.* The point—the—the baboon study, in my mind, showed that hydrochloric acid could cause fibrosis as a chronic sequelae of an acute exposure.

Q. Okay. So you relied on that to say hydrochloric acid exposure at some concentration in some species can cause fibrosis?

A. What I'm saying—

Q. Is that fair?

A. —is that—I'm going back to the issue of irritation and that any irritant can eventually result in the development of fibrosis. This is a study, *maybe the only one I found*, that associated hydrochloric acid specifically with fibrosis.

*Id.* at 224 (*emphasis supplied*). In that Dr. Schlesinger again concedes that there is no correlation between the duration and length of the baboon exposure and Mr. Johnson's exposure, the Court concludes that the baboon study is neither reliable nor relevant to this case. Also significant to the Court's conclusion is that the development of fibrosis in the baboon was at 10,000 ppm for fifteen minutes over the course of a year compared to Mr. Johnson's one or two exposures at peak concentration levels of ten to fifty ppm.

The next issue in a *Daubert* analysis is whether the theory or technique has been subjected to peer review and publication. *Daubert*, 509 U.S. at 593. In his deposition, Dr. Schlesinger acknowledged that he thoroughly researched the relevant scientific literature. Schlesinger depo at 264-65. Concerning his scientific literature review, Dr. Schlesinger testified that there is no data which allows him "to make any opinion as to whether MBTC specifically will result in chronic lung disease of any kind." *Id.* Also relevant to this analysis is Dr.



Schlesinger's testimony set forth above indicating that there are no controlled human or epidemiological studies on MBTC and HCL and no relevant animal studies. Additionally, Dr. Schlesinger expounded on this issue as follows.

Q. So are you aware of – of any study or article that's used any type of scientific method to try and determine a cause-and-effect relationship between hydrochloric acid and restrictive lung disease?

A. No, there aren't any.

Q. And same is true with MBTC, right? There aren't any of those studies?

A. There is almost nothing of anything with MBTC, correct.

*Id.* at 284. Because Plaintiff is unable to identify a relevant peer-reviewed article or publication as to whether inhalation of MBTC and/or HCL causes restrictive lung disease or pulmonary fibrosis, the expert's opinion fails this factor of the *Daubert* reliability analysis.

The next *Daubert* factor to be addressed by the Court is whether the Plaintiff's theory or method has been generally accepted in the scientific community. Dr. Schlesinger testified:

Q. Let me be more specific. Is it generally accepted in your field that one or two acute exposures to MBTC substantially elevates the risk of developing restrictive lung disease?

A. There is no data on that at all.

Q. Okay. So I won't keep beating this, but in other words, you don't have any data at all to make any conclusions regarding relative risk of developing restrictive lung disease after exposure to MBTC?

Q. Is that fair to say?

A. That's exactly–yes, there are no data.

Q. Am–am I right that there are no data that would allow you to draw any conclusions regarding the relative risk of exposure to MBTC through inhalation?

A. The relative risk of what?

Q. Developing chronic pulmonary disease.

A. *There are no data to allow me to make any opinion as to whether MBTC specifically will result in chronic lung disease of any kind.*

*Id.* at 206-08 (*emphasis supplied*).

\* \* \*

Q. Okay, are you able to quantify with any degree of professional certainty, the increased risk of developing restrictive lung disease after exposure to MBTC?

A. I don't think anybody can do that.

Q. Can anyone quantify, to a degree of professional certainty, the increased risk of developing restrictive lung disease after exposure to HCL?

A. No . . . .

*Id.* at 198-99.

In toxic tort cases, the Fifth Circuit has held that "the law cannot wait for future scientific investigation and research. We must resolve cases in our courts on the basis of scientific knowledge that is currently available." *Moore v. Ashland Chemical, Inc.*, 151 F. 3d 269, 276 (5<sup>th</sup> Cir. 1998). Clearly, in the instant case, Plaintiff through Dr. Schlesinger has failed to offer any controlled human studies, epidemiological studies, or relevant animal studies to support his position. Plaintiff's theory has not been peer reviewed nor is it generally accepted within the scientific community. Since no one can quantify the risk of developing restrictive lung disease or pulmonary fibrosis after exposure to MBTC or HCL, the known or potential rate of error of the theory cannot be tested. Simply put, when an expert relies on such a paucity of information to support his causation opinion in a toxic tort case, such methodology is not reliable.

Despite the evidence presented above and the Court's findings with respect to the same, the Plaintiff contends that he has presented reliable evidence to the Court that supports the theory that exposure to MBTC and/or HCL can cause severe restrictive lung disease and/or pulmonary fibrosis. Essentially, the Plaintiff contends that he has offered reliable, circumstantial evidence sufficient to salvage the causation opinion of Dr. Schlesinger. Specifically, Plaintiff suggests that the temporal connection between Plaintiff's exposure and injury support Dr. Schlesinger's causation opinions. Additionally, Plaintiff claims that it is not necessary to provide a chemical

specific cause and effect, but rather it is sufficient that MBTC and HCL are part of a “class of chemicals” which cause inflammation that “can” lead to fibrosis. Further, Plaintiff alleges that MBTC, HCL and tin oxide are “known” to cause the lung injury suffered by him; however, Plaintiff stipulated at the hearing that Dr. Schlesinger is not offering the opinion that tin oxide exposure causes pulmonary fibrosis. Finally, Plaintiff argues that the additive effect of the chemicals to which Johnson was exposed caused his lung injury.

## **2. Temporal Proximity issue**

Plaintiff contends that a temporal connection between the toxic exposure and injury can be reliable evidence of causation and directs the Court to *Curtis v. Petroleum, Inc.*, 174 F. 3d 661, 669 (5<sup>th</sup> Cir. 1999). In *Curtis*, refinery workers and their spouses brought a toxic tort action against the owner of the refinery, a product manufacturer and others claiming that they were exposed to excessive amounts of benzene resulting in numerous health problems. *Id.* at 666-67. The plaintiffs offered the causation opinion of Dr. Frank Stevens, an industrial hygienist, who opined that exposure to benzene caused the symptoms experienced by plaintiffs and that this exposure subjected them to known long-term health problems. *Id.* at 668. Shortly before trial, defendants moved to exclude the causation opinions of Dr. Stevens under *Daubert* which were ultimately excluded by the district court. *Id.* at 667.

On appeal, the Fifth Circuit in *Curtis* reversed the district court and found that Dr. Stevens was erroneously excluded and that his opinion was scientifically reliable. In examining the reliability of Dr. Stevens’ causation opinion, the Fifth Circuit examined the issue of temporal proximity. First, the court noted that “[a] temporal proximity standing alone is entitled to little weight in determining causation.” *Id. citing Moore*, 151 F. 3d at 278. The court expounded that

“[a] temporal connection is entitled to greater weight when there is an *established scientific connection* between exposure and illness or other circumstantial evidence supporting the link(*emphasis supplied*). *Curtis*, 174 F.3d at 670. In reaching its conclusion upholding admissibility of Dr. Stevens’ opinion, the court found that both scientific literature and strong circumstantial evidence supported the causal connection. *Id.*

Therefore, in the instant case, this Court must examine whether the alleged temporal proximity between Mr. Johnson’s exposure and onset of symptoms is entitled to greater weight in the *Daubert* analysis by examining first whether there is an established scientific connection between MBTC and its decomposition byproduct, HCL, and severe restrictive lung disease and/or pulmonary fibrosis. Based upon a review of the evidence discussed above in the Court’s analysis and application of the *Daubert* factors, it is clear that there is not an established scientific connection between exposure to MBTC and/or HCL and the later development of severe restrictive lung disease and/or pulmonary fibrosis.

Additionally, the Court notes that Defendant claims that temporal proximity between exposure and symptom onset does not exist in this case. Arkema claims that when Plaintiff went to the doctor after the initial exposure in June of 2007, he was diagnosed with pneumonia and not chemical inhalation. Arkema’s Reply to Plaintiff’s Response to Arkema’s Motion to Exclude at 12 n.19. Further, Arkema argues that Plaintiff’s medical records did not conclusively evidence chemical inhalation in that his lung function diagnostic tests from the emergency room on the night of the exposure were normal. *Id.* at 12 n.20. Despite the Defendant’s position, the Court will assume *arguendo* that there is a temporal proximity between exposure and onset of symptoms.

Since an established scientific connection between exposure to the chemicals at issue does not exist, the Court will next examine whether there is credible, reliable and relevant circumstantial evidence in existence sufficient to give the alleged temporal proximity of exposure and onset of symptoms the greater weight Plaintiff seeks. The Court will undertake this analysis by individually reviewing the circumstantial evidence offered by Plaintiff.

### 3. "Class of Chemicals" issue

Plaintiff attempts to bolster the opinion of Dr. Schlesinger by arguing that MBTC and HCL are part of a class of irritants which cause inflammation that can progress to interstitial lung disease and pulmonary fibrosis. In support of Dr. Schlesinger's conclusion, Plaintiff offers numerous case reports involving acute exposure to irritants such as ammonia, chlorine, and nitric acid fumes which resulted in severe lung injury. Exhibits 34, 37, 38, 46, 47, 56, 71 and 72 to Plaintiff's Response to Arkema's Motion to Exclude. Additionally, Plaintiff also offered numerous other "class-based" studies in support of Dr. Schlesinger's causation opinion which relate to acute inhalation injury, responses of the lung to toxic injury, lung inflammation and fibrosis, as well as other similar studies. Exhibits 35, 36, 39, 40, 41, 42, 43, 44, 45, 55, 59, 60, 63, 64, and 67 to Plaintiff's Response to Arkema's Motion to Exclude.

In *Knight v. Kirby Inland Marine, Inc.*, the Fifth Circuit considered whether a district court properly excluded the plaintiffs' causation expert, a Dr. Levy, where the district court found deficiencies in the various studies and articles relied upon by the expert. *Knight v. Kirby Inland Marine, Inc.*, 482 F.3d 347, 351 (5<sup>th</sup> Cir. 2007). While working as a tankerman, the plaintiff was exposed to benzene and later developed Hodgkins lymphoma. In reaching his causation opinion, Dr. Levy relied on numerous case-control, cohort and nonspecific studies. *Id.* at 352. One such

study heavily relied upon by plaintiff was a “class-based” study known as the Olsson study which concluded that exposure to organic solvents may constitute an occupational risk with regard to Hodgkins. *Id.* Another study (L. Hardell) relied upon by the plaintiffs’ expert was also one that focused on organic solvents as a class, including a wide range of chemicals to which plaintiff was never exposed. *Id.* at 353. The Fifth Circuit affirmed the district court’s exclusion of Dr. Levy on the ground that the “analytical gap” between the over fifty studies relied upon by Dr. Levy and his conclusions was simply too great and that his opinions were, therefore, unreliable. *Id.* at 355; *see also Wells v. Smithkline Beecham Corp.*, 601 F. 3d 375, 380-81 (5<sup>th</sup> Cir. 2010)(rejecting causation expert’s opinions which were based on class association based studies as opposed to a specific medication finding).

Similarly, the case reports and general class based studies demonstrating that exposure to irritants can cause inflammation which can lead to severe restrictive lung disease and fibrosis require Dr. Schlesinger to extrapolate and this Court to make a leap of faith on the ipse dixit of Dr. Schlesinger. *See Burleson*, 393 F. 3d at 587. Like the courts in *Knight* and *Wells*, in this case, there is “too great an analytical gap between the data and the opinion proffered.” *Id.* Many of the case reports offered by Plaintiff, like those in *Knight*, relate to specific chemicals (i.e., ammonia, chlorine, nitrous oxide fumes) to which Mr. Johnson was never exposed. Other than stating that MBTC and HCL are of the class of irritants that cause inflammation that *can* lead to fibrosis, the Court concludes that Plaintiff has offered no reliable or relevant causal nexus between the class-based studies and Mr. Johnson. Significant to this decision is Dr. Schlesinger’s testimony quoted verbatim above that *there are not any studies or articles that used any type of scientific method* to try and determine a cause-and-effect relationship between

either MBTC or HCL and restrictive lung disease and fibrosis. Schlesinger depo at 284. Absent a causal nexus between the class based studies and Mr. Johnson's case, as well as a lack of studies that utilize a scientific method showing a causal relationship between the chemicals at issue and the disease at issue, relying on such information is not a reliable methodology to support a causation opinion.

**4. Plaintiff's contention that MBTC is known to cause Johnson's lung injury**

**a. Material Safety Data Sheet is reliable causation evidence**

In support of Dr. Schlesinger's contention that MBTC is known to cause the type of injury sustained by Mr. Johnson, the Plaintiff also relies on the Material Safety Data Sheet ("MSDS") issued by Defendant. Specifically, the Plaintiff contends it is significant that the MSDS provides that MBTC has been designated a "hazardous chemical" by OSHA. Exhibit 2, to Plaintiff's Response to Arkema's Motion to Exclude. Plaintiff also points out that the MSDS provides the reader with toxicological information from the rat study discussed in detail above. Although the Plaintiff in his brief states that the "5<sup>th</sup> Circuit has recognized that an MSDS is scientifically reliable evidence of causation" and cites *Curtis* for the proposition, there is nothing in the opinion to suggest such is the case. See *Curtis*, 174 F.3d at 669 (noting that the plaintiff's expert found the MSDS to be a "valid and accurate portrayal" of a chemical's hazards). In *Curtis*, the Fifth Circuit found that the causation expert should be permitted to testify because "both scientific literature and strong circumstantial evidence support the causal connection. *Id.* at 670. Unlike the present case, the evidence in *Curtis* consisted of the expert's reliance on: 1) a toxicological profile for Benzene published by the Department of Health and Human Services, the Public Health Service and the Agency for Toxic Substance and Disease Registry which



documented all of the epidemiological studies regarding the toxicity of benzene and its adverse health effects, and 2) the United States Supreme Court decision in *Industrial Union v. American Petrol, Inst.*, 448 U.S. 607 (1980) in which the Supreme Court discussed several studies regarding the hazardous effects of benzene and the exposure levels at which these effects occur.

In order for the MSDS to be reliable, there must be evidence of science underlying its creation. As mentioned above, the toxicological profile of MBTC contained in the MSDS is based on the rat study which the Court has previously found to be unreliable and not relevant to Mr. Johnson's case. As the Fifth Circuit in *Wells* stated with regard to relying on a company's internal documentation, "mining this data is not the scientific method; rather, it is rife with bias and variability." *Wells*, 601 F. 3d at 381 n.30.

#### **b. Arkema's MBTC Inhalation Exposure Study**

Plaintiff offers Arkema's 1988 rat study as circumstantial evidence to support Dr. Schlesinger's conclusion that MBTC caused Mr. Johnson's restrictive lung disease and pulmonary fibrosis. In that Dr. Schlesinger conceded in his deposition testimony set forth in detail above that there is no correlation between the duration and length of exposure between the rat study and Mr. Johnson's exposure, the Court concludes that the rat study is neither reliable nor relevant. Schlesinger depo at 211-14.

#### **c. Johnson's exposure exceeded permissible limits**

Another piece of circumstantial evidence is Plaintiff's contention that Johnson's exposure to MBTC far exceeded OSHA's permissible exposure limit. Plaintiff correctly notes that the limit for organotin compounds, of which MBTC is one, is 0.1 milligrams per cubic meter. However, the Court is of the opinion that this contention is misleading. On this issue, Dr.

Schlesinger testified as follows:

Q. Okay. So there's not a separate TLV (threshold limit value) for MBTC as opposed to dibutyltin trichloride?

A. It's one for the whole group [of organotins].

Q. Right.

A. —correct.

Q. And within that group, we've already found out today that some of the compounds are more toxic than others, correct?

A. That's correct.

Q. And so that TLV would be set to protect people from exposure to the most toxic compounds within that group, wouldn't it?

A. It's probably —it's based on whatever they had — I don't know what — let me rephrase that. I don't know which of the organotins they had the most data on. It would be based on whichever one they had the most data on in terms of inhalation.

Q. So you do know that within the organotin group there was a paucity of data on MBTC?

A. A paucity to none, correct.

Q. Fair enough. And so it would make sense, then, that *the TLV for organotins as a group was not set based on data relating to MBTC?*

A. *That's clear.*

Q. All right. And so the TLV for organotins as a group was set based on data that was available for a —an organotin that's more toxic than MBTC?

A. Correct.

*Id.* at 216-17 (*emphasis supplied*).

Having reviewed Dr. Schlesinger's testimony, a more accurate statement for Plaintiff to have made is that Johnson's exposure exceeded the threshold limit value for an organotin more toxic than MBTC, and that there is no data as to the level at which MBTC is toxic to humans.

As set forth above, since there is no data on the level at which MBTC is toxic to humans, the fact that Johnson was exposed to a level of MBTC higher than the permissible limit of 0.1 milligrams per cubic meter for organotins is irrelevant absent correlation to Johnson's case. Again, the Plaintiff tries to analogize Johnson's exposure to levels in the rat study, but Dr. Schlesinger testified that the exposure scenarios are different and that they cannot be correlated. Schlesinger

depo at 211-14.

**5. Plaintiff's contention that HCL is known to cause Johnson's lung injury**

**a. MSDS for Hydrochloric acid**

The Plaintiff again relies on a MSDS as circumstantial evidence to support the theory that HCL exposure caused Johnson's severe restrictive lung disease and fibrosis. The Court has previously addressed Plaintiff's position that the MSDS is scientifically reliable evidence of causation and rejected the same. As further support for this argument, the Plaintiff relies on a MSDS for HCL used by other chemical manufacturers. Exhibit 53, to Plaintiff's Response to Arkema's Motion to Exclude. Specifically, Exhibit 53 is a Material Safety Data Sheet issued by Airgas, Inc. which provides that inhalation of HCL can be extremely hazardous and corrosive to the lungs. First, the Court notes that the Airgas MSDS does not state that exposure to HCL can cause severe restrictive lung disease and fibrosis. Second, and most importantly, the Plaintiff has not provided any science behind the MSDS. The document does not identify the duration or concentration of exposure needed to produce the noted effects. Additionally, it does not identify what scientific literature is relied upon by Airgas for the statements contained in the MSDS. Accordingly, Plaintiff has failed to demonstrate either the reliability or the relevance of the MSDS.

**b. The HCL Baboon study**

Plaintiff offers the baboon study as circumstantial evidence to support Dr. Schlesinger's conclusion that HCL caused Mr. Johnson's restrictive lung disease and pulmonary fibrosis. In that Dr. Schlesinger conceded in his deposition testimony set forth in detail above that there is no correlation between the duration and length of exposure between the baboon study and Mr.

Johnson's exposure, the Court concludes that the baboon study is neither reliable nor relevant. Schlesinger depo at 223-24.

**c. Arkema's expert offers support for Dr. Schlesinger's conclusion**

Next, Plaintiff alleges that Arkema's expert, Dr. Robert Aris, relies on at least three human case reports which demonstrate that HCL is capable of causing severe restrictive lung disease and fibrosis. Exhibits 57, 58 and 59 to Plaintiff's Response to Arkema's Motion to Exclude. Having carefully reviewed each of the exhibits, the Court notes that none of the anecdotal case reports referenced in the exhibits involve any individual developing severe restrictive lung disease or fibrosis. Exhibit 58, entitled, "*Hydrochloric acid inhalation: who needs admission?*" summarizes the results of known studies and reports on HCL as follows:

In the last 20 years, few studies relevant to acute HCL inhalation in humans have been published. Most laboratory studies have been performed on animal models and are therefore of questionable relevance in human exposure. One study used laboratory tests to monitor lung function in 11 patients who accidentally inhaled a mixture of noxious fumes including HCL. The lung function abnormalities recorded resolved within a short time. Another paper also showed no long term adverse health effects of HCL inhalation by young adult asthmatics. However, a case of asthma has been reported following inhalation of sodium hypochlorite and HCL, which persisted for two years. This is supported by two other papers, which cite asthma as an adverse effect of exposure to HCL. On the basis of these studies no generalization can be drawn regarding long term sequelae of HCL inhalation in either normal subjects or those with pre-existing asthma.

Exhibit 58 at 423, to Plaintiff's Response to Arkema's Motion to Exclude.

Contrary to Plaintiff's assertion, the case reports discussed by Dr. Aris do not support the theory that exposure to HCL causes severe restrictive lung disease and fibrosis. As such, the Court finds that the case reports identified in Exhibits 57, 58 and 59 are neither reliable or relevant.

**d. Johnson's exposure to HCL exceeded all permissible limits**

As further support for Dr. Schlesinger's conclusion, Plaintiff informs the Court that experts have estimated Johnson's exposure to HCL to be in excess of the permissible exposure limit. Plaintiff's expert, Joe Lauderdale, estimated Johnson's exposure to be 15 to 75 milligrams per cubic meter. The OSHA permissible limit for HCL is 7 milligrams per cubic meter. Exhibit 51 at 7, to Plaintiff's Response to Arkema's Motion to Exclude. However, in his discussion of the high HCL exposure, Plaintiff fails to explain or offer support as to how such an exposure can lead to severe restrictive lung disease. Plaintiff's argument is simply that HCL is an irritant which causes inflammation that leads to fibrosis. The Court has previously dismissed Plaintiff's class based position as being neither reliable or relevant. Likewise, the fact that Plaintiff's exposure to HCL may be in excess of the permissible limit standing alone or, in conjunction with Plaintiff's other circumstantial evidence, is not persuasive.

**6. The Additive Effect of MBTC, HCL and Tin Oxide**

As a final argument, Plaintiff suggests that his exposure to MBTC, HCL and tin oxide in combination created an "additive toxicity," increasing the relative risk of harm. In other words, Plaintiff claims that the combined effect of the toxic components Johnson was exposed to would be expected to equate to the toxic effect of a significantly higher level of exposure than just to a single chemical irritant. On the issue of additive toxicity, Dr. Schlesinger testified as follows:

Q. Has anyone, as far as you know, tested the idea that MBTC and HCL would be dose additive?

A. Specifically those two chemicals?

Q. Yep.

A. No.

Schlesinger depo at 270-71.

\* \* \*

Q. Okay. So do I understand your opinion in this case, then, to be that you would expect MBTC and HCL to be dose additive; your just not aware of how to quantify that?

A. I would expect that it would be dose additive, but I haven't quantitated it, right, and I'm not – right, I haven't quantitated it.

Q. Right. And your not qualified to do that?

A. Well, I'm not qualified to do it.

*Id.* at 268-69.

Interestingly, Plaintiff claims that the chemicals he was exposed to are dose additive when Dr. Schlesinger admits that no one has tested the idea, he would “expect” them to be, but he hasn't “quantitated” it and is not qualified to do so. Further, assuming *arguendo*, that the chemicals are dose additive, there is no evidence that such a dose leads to severe restrictive lung disease and fibrosis. As such, the dose additive argument is not reliable in this context.

### **C. Conclusion**

Having carefully reviewed all exhibits and considering the arguments of both parties, the Court concludes that Dr. Schlesinger's opinion that exposure to MBTC and HCL cause severe restrictive lung disease and fibrosis in the general population and did so in the case of Mr. Johnson is unpersuasive in that it has never been tested, never been submitted for peer review, and is not generally accepted within the scientific community. Plaintiff through Dr. Schlesinger has failed to offer any controlled human studies, epidemiological studies, or relevant animal studies to support his position. Additionally, the Court examined the circumstantial evidence presented by Plaintiff and for the reasons stated above concludes that it is not reliable and not relevant to Mr. Johnson's case. Although there is some evidence of temporal proximity between Mr. Johnson's exposure and onset of symptoms, the Court assigns little weight to the temporal

connection because an established scientific connection between exposure to the chemicals at issue and severe restrictive lung disease does not exist, and the circumstantial evidence presented is not credible, reliable or relevant. Accordingly, the Court further concludes that Dr. Schlesinger's opinions on this issue are not reliable or relevant for the reasons set forth above and should be excluded. As such, this Court recommends that Arkema's Motion to Preclude the Opinions and Testimony of Richard B. Schlesinger, Ph. D. should be granted.

## **II. Defendant's Motion to Exclude Expert Testimony of Dr. Charles J. Grodzin**

### **A. Dr. Charles J. Grodzin's Background and Opinions**

Plaintiff's expert, Dr. Charles J. Grodzin, has provided an initial report (March 26, 2010), one oral deposition (August 26, 2010), a statement of "Changes and Reasons" to his August 26, 2010 deposition and an affidavit including a subsequent report (October 12, 2010). Dr. Grodzin received his Bachelor of Arts in Philosophy and Chemistry from Emory University in 1986. Exhibit J, pg. 1, to Plaintiff's Response to Defendant's Motion to Exclude. In 1990, he graduated from Rush Medical College in Chicago, Illinois where he also completed his internship, residency, and chief residency in internal medicine at Rush-Presbyterian St. Luke's Medical. *Id.* at 3-5. His post-graduate positions include positions as a Medical Director and physician specializing in pulmonary medicine. *Id.* at 5-6. Dr. Grodzin is board certified in Internal Medicine, Pulmonary Medicine, and Critical Care Medicine from the American Board of Internal Medicine. *Id.* at 7. Further, Dr. Grodzin has hospital privileges at Denton Community Hospital/Presbyterian Hospital of Denton, North Texas Hospital, Mayhill Hospital, and Atrium Medical Center. *Id.* at 6. Currently, Dr. Grodzin serves as the Medical Director for the Denton



Medical Services Pulmonary Rehabilitation Center.

In his initial report, Dr. Grodzin reviewed the following: 1) Johnson's medical records, 2) Johnson's Deposition, 3) the deposition of Dr. Camille Hinojosa, 4) information related to the Certincoat TC-100 chemical Johnson had been exposed to, 5) scientific articles and studies related to the effects of inhalation exposure to Certincoat TC-100 and its byproducts, 6) other records and documents related to Johnson's exposure, and 7) the reports and opinions of Defendant's experts, Dr. Robert Aris and Dr. Janci Lindsay<sup>1</sup>. Plaintiff's Response to Defendant's Motion to Exclude at 6-7. Also, Dr. Grodzin consulted with Dr. Richard Schlesinger, a toxicologist retained by the Plaintiff, and Mr. Jerry Lauderdale, an industrial hygienist retained by the Plaintiff *Id.* at 7-8. On January 25, 2010, Dr. Grodzin personally interviewed and examined Mr. Johnson. *Id.* at 7. During this clinical evaluation, Dr. Grodzin performed a complete pulmonary function test as well as an ambulatory oximetry evaluation. *Id.*

After conducting this research, Dr. Grodzin found that there was no evidence that Mr. Johnson had a history of a pre-existing lung disease or second-hand smoke. Also, Mr. Johnson's symptoms appeared to not be correlated with a cardiologic cause. *Id.* at 8. Further, Dr. Grodzin stated in his initial report that Mr. Johnson suffers from severe restrictive lung disease or possibly pulmonary fibrosis with possible overnight hypoxemia. Defendant's Motion to Exclude Exhibit B at 22, 23. Dr. Grodzin concluded that "the outcome of MBTC or HCL exposure could lead to ... restrictive lung disease due to development of pulmonary fibrosis." *Id.* at 24. Finally, Dr.

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<sup>1</sup>Dr. Grodzin issued a detailed 10-page report in response to his review of the reports of Dr. Aris and Dr. Lindsay. *See* Dkt. # 95, Exhibit J.

Grodzin hypothesized that Mr. Johnson's lung disease was permanent and likely to worsen.<sup>2</sup> *Id.*

After the issuance of his first report, Dr. Grodzin received the results of additional medical testing that was performed on Johnson. *Id.* at 9. Specifically, on September 10, 2010, Dr. Grodzin ordered a High Resolution CT scan of Mr. Johnson's chest. *Id.* According to this additional testing, Dr. Grodzin confirmed that Mr. Johnson had diffuse interstitial lung disease with "significant involvement" over 50% of Johnson's lung tissue. *Id.*

As a result, Dr. Grodzin opined that the MBTC or HCL exposure triggered Mr. Johnson's condition rather than his weight gain. Defendant's Motion to Exclude, Exhibit G at 148. During his deposition, Dr. Grodzin admits that obesity can cause a restriction in pulmonary function. However, Dr. Grodzin ultimately ruled out obesity as a cause because he was able to review this CT scan that showed scarring across 50% of Mr. Johnson's lungs. Plaintiff's Response to Defendant's Motion to Exclude at 15; Exhibit H, AA. Then, on October 12, 2010, Dr. Grodzin issued a second report along with Plaintiff's affidavit that described his opinions concerning the medical care and costs that Mr. Johnson will require in the future due to his lung injury. *Id.* at 10.

Significantly, on September 28, 2010, Dr. Grodzin issued a statement of "Changes and Reasons" as a supplement to his August 26, 2010 deposition. In the two page supplement, Dr. Grodzin provides:

I responded that the gold standard for the diagnosis of pulmonary fibrosis is demonstration of fibrous tissue on lung biopsy. However, it is important to remember that some diagnoses can be made clinically when a gold-standard test has not or cannot be completed. In this circumstance, not knowing the results of

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<sup>2</sup>Dr. Grodzin also opined that long term survival or quality of life may depend on his acquiring a lung transplantation. *See id.* at 8.

Mr. Johnson's recent CAT scan of the chest as well as the negative results of his serological evaluation, I believe clinically, to a reasonable degree of medical certainty, that Mr. Johnson has pulmonary fibrosis as a result of his exposure to MBTC/HCL as discussed. It has been evident in his pulmonary function tests and is now demonstrated further on his recent CAT scan of the chest.

Exhibit B, to Defendant's Reply Brief in Support of its Motion to Exclude.

Further, Exhibit "K" to Plaintiff's Response to Defendant's Motion to Exclude Dr.

Grodzin is a four page Affidavit written by Dr. Grodzin with numerous supporting exhibits. In the Affidavit, Dr. Grodzin opines that "I have now concluded, to a reasonable degree of medical certainty that Mr. Johnson suffers from interstitial lung disease resulting in a severe restrictive condition, and pulmonary fibrosis." *Id.*

**B. Arkema contends Grodzin's "new" pulmonary fibrosis opinion is untimely**

In its Reply Brief in Support of its Motion to Exclude, Defendant Arkema alleges that the opinion by Dr. Grodzin that Plaintiff now has pulmonary fibrosis is untimely and results oriented. Specifically, Defendant contends that Dr. Grodzin in his "errata" sheet and affidavit, attempts to offer substantively new opinions in violation of the court imposed deadline for expert reports and in violation of the law of the Fifth Circuit. *See Reliance Ins. Co. v. Louisiana Land & Exploration Co.*, 110 F. 3d 253, 258 (5<sup>th</sup> Cir. 1997). Defendant also contends that the change in opinion establishes the unreliability of Dr. Grodzin. *See Lemmerman v. Blue Cross Blue Shield of Wisconsin*, 713 F. Supp. 2d 791, 807 (E.D. Wisc. 2010).

At the oral argument on Defendant's Motions to Exclude, the Court addressed the above issue with the parties. In response to Defendant's position, Plaintiff suggests that Dr. Grodzin's "errata" sheet and affidavit are not a change in opinion, but merely a confirmation that is consistent with his earlier report that "Mr. Johnson suffers from severe restrictive lung disease

(possibly advanced pulmonary fibrosis)."

In resolving this issue, the Court finds persuasive the case of *Pritchard v. Dow Agro Sciences*, 263 F.R.D. 277 (W.D. Pa. 2009). The court in *Pritchard* considered in a toxic tort case whether one of Plaintiff's experts issued a rebuttal report which was untimely and consisted of new opinions. *Id.* at 284. After analyzing the issue, the court concluded that the expert's rebuttal report in the form of a "declaration" did not "include any new opinions but serves to further elaborate upon the initial opinions expressed . . . ." *Id.* at 286-87.

As in *Pritchard*, the undersigned is of the opinion that Dr. Grodzin's opinion that Mr. Johnson now has pulmonary fibrosis as opposed to the possibility of pulmonary fibrosis is merely an elaboration of his earlier opinion after receipt of new information learned after the expert report deadline. Dr. Grodzin claims in his statement of "Changes and Reasons" that his pulmonary fibrosis opinion was confirmed after evaluating the results of the September 10, 2010 CT scan and the negative results of a serological test. Although Defendant contends that they will be prejudiced by the expansion of Dr. Grodzin's opinion, the Court notes that they have been aware that Dr. Grodzin has maintained in his earlier reports and deposition testimony that the Plaintiff had severe restrictive lung disease and the possibility of pulmonary fibrosis. In his deposition, Dr. Grodzin testified that:

A. I have never come to the conclusion that he has fibrosis or scarring.

Q. I understand that. But just stick with my question. Without a lung biopsy, can you come to that conclusion, to a reasonable degree of medical certainty?

A. *You could come to that conclusion.*

Exhibit A ("Grodzin depo") at 156, to Defendant's Motion to Exclude (*emphasis supplied*).

\* \* \*

A. I have not made a diagnosis of pulmonary fibrosis, if that's what you're asking.

Q. Okay. That answers that question. So then I guess what I'm trying to find out is how you would make that diagnosis. And one way you've indicated to us to make that diagnosis is through a lung biopsy, right?

A. Correct.

Q. And you've said that's the gold standard for doing that diagnosis.

A. That would be the gold standard.

Q. Okay. So what other objective diagnostic test data would show you that there was scarring in Mr. Johnson's lungs?

A. Well, I think that any other objective data, other than a lung biopsy, that led you to a conclusion that he had pulmonary fibrosis or the presence of scar tissue in his lungs would be an extrapolation. . . . I would not come to a conclusion of pulmonary fibrosis without a biopsy.

*Id.* at 156-57.

In summary, as is evidenced by the testimony above, Dr. Grodzin has chosen to extrapolate in his "errata" sheet and affidavit and now conclude that Plaintiff has pulmonary fibrosis based on new data and not a lung biopsy. Dr. Grodzin testified that one could come to an opinion of pulmonary fibrosis absent a lung biopsy, but that he would not do so. Clearly, that is no longer the case. Based upon *Pritchard* and the reasons set forth in his "errata" sheet and Affidavit, the Court will permit the extension of Dr. Grodzin's opinion as being mere elaboration of his earlier opinion as opposed to a new opinion.

**C. Analysis of whether Dr. Grodzin's opinion is reliable**

If admitted as an expert witness, Dr. Grodzin will give two opinions. First, he has opined, with a reasonable degree of medical certainty, that Mr. Johnson suffers from interstitial lung disease resulting in a severe restrictive condition, and pulmonary fibrosis. Plaintiff's Response to Defendant's Motion to Exclude, Exhibit K, at 5; Defendant's Motion to Exclude Exhibit B at 22, 23. Second, Dr. Grodzin has also concluded that "Mr. Johnson has pulmonary fibrosis as a result of his exposure to MBTC/HCL . . . ." Exhibit B, to Defendant's Reply Brief in Support of its

Motion to Exclude.

The Court must look to whether Dr. Grodzin has used reliable methodology in coming to his opinions. Because the Plaintiff's expert has issued both diagnostic and causation opinions, the Court must analyze the reliability of each of the expert's opinions, in turn. Each aspect of the testimony "should generally be assessed separately, since the bases for such opinions are often quite different." Mary Sue Henifin, Howard M. Kipen & Susan R. Poulter, *Reference Guide on Medical Testimony*, in Reference Manual on Scientific Evidence 472 (2d ed. 2000). First, this Court must decide whether the medical expert's diagnosis of a specific ailment is reliable. *Id.* Second, the Court must analyze whether the expert's opinion is reliable when he opines that exposure to certain chemicals causes a specific ailment. *Id.* Accordingly, the Court will analyze Dr. Grodzin's two conclusions separately under the *Daubert* test for reliability.

**1. Analysis of whether Dr. Grodzin's diagnosis is reliable and relevant**

In its Motion to Exclude, Defendant contends that Dr. Grodzin's diagnosis of severe restrictive lung disease and pulmonary fibrosis is unreliable because: 1) Dr. Grodzin has not diagnosed Plaintiff with a specific illness or disease and did not conduct a differential diagnosis, 2) Dr. Grodzin's opinion that Johnson has a restrictive lung disease is "fundamentally unsupported," and 3) that Dr. Grodzin ignores and misrepresents medical evidence. In contrast, Plaintiff argues that Dr. Grodzin reviewed all the relevant medical facts and history, conducted a differential diagnosis, correctly ordered and analyzed medical tests performed on Mr. Johnson, and came to the reasonably certain medical conclusion Mr. Johnson has severe restrictive lung disease and pulmonary fibrosis. Also, Plaintiff contends a lung biopsy is overly invasive and unnecessary to prove Mr. Johnson's pathological diagnosis. Neither party contests Dr. Grodzin's

qualifications as a physician or as a pulmonary specialist with over a decade of practice experience. Instead, Defendants claim that the doctor ignored the facts of Mr. Johnson's case and that his diagnosis is, therefore, unreliable.

**a. Alleged Failure to Diagnose a Specific Illness**

In their Motion to Exclude Dr. Grodzin, Defendant argues that he only classified Plaintiff with a general class of disorders (restrictive lung disease), as opposed to a specific illness, demonstrating that Dr. Grodzin's opinion is not based on scientifically valid reasoning or methodology. Even assuming that severe restrictive lung disease is not an appropriate clinical diagnosis which can survive a *Daubert* analysis, Dr. Grodzin has now diagnosed Johnson with pulmonary fibrosis as explained in his "errata" sheet and Affidavit. As such, Defendants argument is now moot.

**b. Alleged Failure to Perform Differential Diagnosis**

Arkema also alleges that Dr. Grodzin's methodology is unsound because the undisputed evidence shows that he did not perform a complete differential diagnosis and ignored his own methodology for diagnosis of pulmonary fibrosis in reaching a conclusion without conducting a lung biopsy. In response, Plaintiff directs the Court to Dr. Grodzin's deposition testimony on the issue of conducting a differential diagnosis:

Q. Do you know what a differential diagnosis is?

A. Yeah.

Q. What is a differential diagnosis?

A. A differential diagnosis is a summary of diagnoses, usually ranked by likelihood and/or threatening nature, that a physician constructs to organize a diagnostic evaluation.

Q. And have you performed a differential diagnosis to determine the illness that's causing Mr. Johnson's lung restriction?

A. Yeah. To some degree, uh-huh. Yes.



Q. To what degree.

A. Well, what I'm referring to is the fact that he comes to me with a history that's intact. And in those kinds of situations, the history, if it suggests—and in his case it suggests strongly—what his problem is, the differential diagnosis is more limited. Although under these circumstances I still feel that it's prudent to be thorough, and I'm going to go to rule out other diagnoses, as we mentioned, with serologies and the lung biopsy I've asked for. But— And my differential diagnosis for him, his chemical exposure with the MBTC and HCL, is still at the top of my list as the major issue, and the other diagnoses, which we're going to try and look at through those modalities are far lower on the list.

Grodzin depo at 148-49.

In this case, Dr. Grodzin interviewed the patient, thoroughly reviewed his medical history, examined him, ordered and analyzed medical tests, and considered alternative diagnoses. *See id.* and Exhibits K, to Plaintiff's Response to Defendant's Motion to Exclude. Contrary to Defendant's position, Dr. Grodzin did consider obesity and sleep apnea as possible alternatives to interstitial lung disease and pulmonary fibrosis; however, the doctor gave plausible reasons for discarding these alternatives. *See Grodzin depo at 148; see also Exhibits H and K to Plaintiff's Response to Defendant's Motion to Exclude.* While Defendant may not be satisfied with the thoroughness or completeness of Dr. Grodzin's differential diagnosis, such an attack on his opinion is more appropriate for cross-examination than *Daubert*.

As mentioned above, Defendant also criticizes Dr. Grodzin's reliability because he ignores his own stated methodology for diagnosing pulmonary fibrosis: conducting a lung biopsy. Courts tend to exclude a doctor's expert testimony concerning a diagnosis when it looks as if the doctor has "cooked up" his medical diagnosis to support the litigation. *Lemmermann*, 713 F. Supp. 2d at 807 (medical doctor's diagnosis was excluded when she received incorrect information from plaintiff, ignored past symptoms and medical records indicating preexisting

history with asthma and admitted that possible alternative explanation was the plaintiff's latent asthma condition); *Paz v. Brush Engineered Materials, Inc.*, 555 F.3d 383, 389 (5th Cir. 2009) (medical doctor's diagnosis excluded when doctor predicated portion of his diagnosis on another doctor's analysis of slides which had not been collected or analyzed).

While it is clear to the undersigned that Dr. Grodzin testified that he "would not come to a diagnosis of pulmonary fibrosis without a biopsy," he also testified that a physician could diagnosis pulmonary fibrosis absent one. Grodzin depo at 156-57. Since issuing his initial opinion, Dr. Grodzin has consistently maintained that significant medical evidence exists that suggests the strong possibility of pulmonary fibrosis. Although a diagnosis of pulmonary fibrosis after confirmation through a lung biopsy might be a preferred methodology, requiring a plaintiff to undergo such a risky, expensive and invasive procedure before permitting admissibility of such a diagnosis would be absurd and beyond the requirement of *Daubert*. The fact that Dr. Grodzin has made a classic flip-flop in his methodology may be grounds for fertile cross-examination, but it does not preclude his admissibility as an expert.

**c. Alleged opinion is fundamentally unsupported and unsound**

Defendant's next argument is that Dr. Grodzin's opinion in large part is based on the factual premise that Johnson is "disabled" at work and that he reached his opinion only by ignoring, or subjectively dismissing, the weight of objective evidence, primarily from Johnson's medical records. The medical records Defendant claims were ignored by Dr. Grodzin consist of a "normal" 2007 CT scan with no diagnostic abnormalities, X-rays from 2007 which were "normal" or showed "nothing acute," "normal" pulmonary function tests from 2007, 2008 and 2010, and "normal" diffusion tests. Additionally, Defendant alleges that Dr. Grodzin ignores

Johnson's failure to seek medical care for his alleged condition since November 2008. Finally, Arkema argues that the radiologist who read Johnson's September 2010 CT scan concluded that it does not show pulmonary fibrosis.

In his response, Johnson addresses each of the Defendant's arguments claiming that the items referenced above were considered by Dr. Grodzin as part of his methodology and drew reasonable conclusions based on the medical evidence "as a whole." Plaintiff contends that imaging, such as the 2007 CT scan and X-rays, taken soon after an exposure may not indicate that the inflammatory process has begun. Plaintiff also argues that Defendant fails to address in its Motion to Exclude that the July 17, 2007 x-ray was read as indicating a degree of interstitial scarring and that the September 2010 CT scan shows diffuse interstitial lung disease over 50% of his lungs. As to the pulmonary function tests, Plaintiff claims that they clearly show a decline in lung function from the date of his exposure until November 2008.

Having carefully considered the above parry and thrust set forth in detail in the parties' briefs, the Court concludes that such factual issues go to the weight and credibility of the evidence offered, and not its admissibility. Each of the above arguments is more appropriate for vigorous cross-examination and presentation of contrary evidence in the Defendant's case-in-chief. *See Daubert*, 509 U.S. at 596.

In conclusion, the Court finds that Dr. Grodzin's opinion as to the nature and extent of Mr. Johnson's alleged illness is reliable and that his methodology in arriving at the same is sufficient to satisfy *Daubert*. As such, the Court will recommend that the District Court deny in part Defendant's Motion to Exclude to the extent it seeks exclusion of Dr. Grodzin's opinions as to the nature and extent of Mr. Johnson's condition.

**2. Analysis of whether Dr. Grodzin's causation opinion is reliable and relevant**

As set forth above, Dr. Grodzin's causation opinion is that the cause of Mr. Johnson's severe restrictive lung disease and pulmonary fibrosis is his exposure to MBTC and HCL. At the *Daubert* hearing, the Court inquired of Plaintiff's counsel as to whether Dr. Grodzin's causation opinion is derivative of Dr. Schlesinger's opinion. In response, counsel informed the Court that it is derivative with the exception of Dr. Grodzin's differential diagnosis analysis. Dr. Grodzin testified that he relied on the following information in reaching his causation conclusion:

Q. And would you tell me everything you relied on in reaching that conclusion?

A. The time frame of his exposure and illness; the entirety of the medical records, including the depositions of Mr. Johnson and his doctor, Dr. Hinojosa; the information provided by the toxicologist, Dr. Schlesinger; the industrial hygienist, Mr. Lauderdale; my own impressions from my interview' his serial and pulmonary function testing' and information concerning his life-style and work changes commensurate with his ability. There may be more things I'm leaving out, but—

Q. Well, Doctor, today is the day for you to tell me everything. So what else can you remember?

A. Well, my review of some literature. There were studies on MBTC and hydrochloric acid in animals. I think that's probably pretty much it.

Grodzin depo at 237.

In other words, Dr. Grodzin is relying on the temporal proximity between exposure and onset of symptoms, the "class of chemicals" argument, the MBTC rat study, the HCL baboon study and the other arguments advanced by Dr. Schlesinger, all of which have rejected by the Court, and found to be unreliable in supporting a causation opinion in this case. The only leg remaining on which Dr. Grodzin attempts to stand is the differential diagnosis analysis; or, put another way, "I've ruled out every other possible cause, so it must be the one remaining."

Irrespective, the basis for such an opinion in a toxic tort case must withstand a *Daubert* analysis and be supported by science. As set forth in detail above, no such causal nexus exists establishing that exposure to MBTC and/or HCL causes severe restrictive lung disease and pulmonary fibrosis.

In response to deposition questions on the above issue, Dr. Grodzin testified as follows:

Q. Is it generally accepted in your field that one or two exposures to MBTC or HCL can cause long-term progressive restrictive lung disease?

A. I believe the toxicologist speaks to that.

Q. Okay. Well, I'm asking you a slightly different question, Doctor. Is it generally accepted in your field that one or two exposures to MBTC or hydrochloric acid can cause long-term progressive restrictive lung disease?

A. I don't believe there's a general feeling in my field about that specifically.

Grodzin depo at 239.

Additional evidence from Dr. Grodzin's initial report and deposition testimony shows that his theory of causation has not been tested. Dr. Grodzin mentions in his initial report that "[t]here are no controlled studies of the effects of MBTC/HCL on human lung tissue." See Ex.B, to Defendant's Motion to Exclude. In his deposition, he provides:

Q. How many reported cases of long-term severe restrictive lung disease resulting from Arkema's hoods are you aware of?

A. I'm not aware of them.

Q. What did you do to find out if there were any?

A. I didn't pursue that.

Q. Are you aware of any human studies on the effects of exposure to MBTC?

A. No.

Q. Are you aware of any controlled studies for the effects on – human studies on the effects of hydrochloric acid?

A. No.

Q. So is it safe to say you didn't rely on any studies that you're aware of in reaching your conclusions? Correct?

A. I don't think any of those studies exist.

Q. Fair enough. What peer-reviewed literature did you review in reaching your conclusion that MBTC or hydrochloric acid could cause, after one or two

exposures, a long-term progressive restrictive lung disease?

A. I don't believe there is any.

Q. Did you review or consult any epidemiology studies?

A. No.

Grodzin depo at 238-39.

\* \* \*

Q. Are you aware, Doctor, of any studies that show that workplace exposure to—on one or two occasions to a respiratory irritant will result in long-term restrictive lung disease?

A. Not that I can quote you at the moment.

*Id.* at 264-65.

Also, in his initial report, Dr. Grodzin briefly references that exposure to the chemical Bleomycin can cause lung toxicity and then claims that this wholly unrelated study with a different chemical can “be used as a model for the pulmonary toxicity exemplified in this case.” *See* Ex. B, to Defendant’s Motion to Exclude. The Court does not find the Bleomycin model even remotely persuasive. In support of this finding, the Court relies in part on the following testimony from Dr. Grodzin:

Q. Do you know of anything to suggest that it’s generally accepted in the scientific community that MBTC has effects on human beings from one or two exposures, similar to Bleomycin toxicity?

A. I don’t believe there’s any human studies on MBTC, that I’m aware of.

Grodzin depo at 248.

As with Dr. Schlesinger’s causation opinion, this Court must follow the Supreme Court’s directive in *Joiner* and conclude that there is simply “too great an analytical gap” between the data relied upon by Dr. Grodzin and the causation opinion he proffers. *Joiner*, 522 U.S. at 146. Thus, this Court concludes that Dr. Grodzin’s expert opinion as to whether Plaintiff’s exposure to MBTC or HCl

caused him to suffer restrictive lung disease and/or pulmonary fibrosis is unreliable, and therefore, inadmissible. The undersigned will recommend that Dr. Grodzin not be permitted to offer his causation opinion for the reasons set forth above.

### **III. Plaintiff's Motion to Exclude Expert Testimony of Dr. Robert Aris**

#### **A. Dr. Robert Aris's Background and Opinions**

Dr. Robert Aris is a medical doctor board certified in internal medicine, pulmonary medicine and critical care medicine. Exhibit A ("Aris Preliminary Report") at 1, to Arkema's Response to Plaintiff's Motion to Exclude. He obtained his medical degree from Vanderbilt University. *Id.* He then completed his residency in internal medicine at the University of Colorado at Denver from 1984-1987. *Id.* He received a fellowship in Pulmonary and Critical Care Medicine at the University of California at San Francisco from 1987-90. *Id.* Currently, he serves as an Associate Professor of medicine at the University of North Carolina ("UNC") at Chapel Hill. *Id.* At UNC, Dr. Aris serves as the Director of the Lung Transplantation Immunology Laboratory, the Pulmonary Hypertension Program and has previously served as the Medical Director of the Lung Transplantation and Inpatient Pulmonary Medical Services. *Id.* Dr. Aris also routinely examines, diagnoses and treats patients with a broad array of complex lung diseases. *Id.* According to his initial report, he has spent the last seventeen years evaluating patients that need lung transplantation and providing aftercare for such patients. *Id.* Dr. Aris estimates that he spends approximately 80% of his time treating patients and the remainder of his time doing medical research and teaching. *Id.* For purposes of the instant motion, Plaintiff does



not contest Dr. Aris's qualifications as a pulmonologist, but does contest his qualifications as to how CT scans are performed and interpreted.

On June 3, 2010, Dr. Aris wrote a three page Preliminary Report for the stated purpose of evaluating whether Johnson "has pulmonary fibrosis resulting from chemical exposure and if he needs a lung transplant." *Id.* After evaluating Plaintiff's medical records, but not examining him, Dr. Aris concludes:

Mr. Johnson does not have pulmonary fibrosis. Pulmonary fibrosis is diagnosed based on two criteria: abnormal chest imaging showing lung scarring and a lung biopsy showing scarring/fibrosis. Mr. Johnson consistently had normal chest x-rays and a CT scan after his exposure and there is no lung tissue for evaluation. His normal diffusing capacity rules out significant lung disease at the level of the air sacs. Thus, there is no evidence of pulmonary fibrosis. While Dr. Grodzin suggested that the patient needed a lung transplant, this patient's condition is not pulmonary fibrosis and this patient would not qualify for lung transplantation using international criteria (ISHLT).

\* \* \*

In addition, there is no evidence of a toxic lung injury due to MBTC and HCL. In addition, Mr. Johnson has a body mass index greater than 40, which makes him morbidly obese. Not only is that a contraindication to lung transplantation at most programs, if in fact Mr. Johnson does actually suffer from shortness of breath or other breathing difficulties, based on the information currently available, in my opinion the most likely cause of his shortness of breath is his morbid obesity and deconditioning.

*Id.* at 3.

On September 7, 2010, Dr. Aris issued a Supplemental Report. Exhibit B "Aris Supplemental Report"), to Arkema's Response to Plaintiff's Motion to Exclude. The Supplemental Report was prepared by Dr. Aris after he was provided with and reviewed Dr. Grodzin's supplemental reports and deposition, Mr. Johnson's second deposition, and several new pieces of medical information including Plaintiff's sleep study, an ABG report (May 17, 2010) and July 2010 pulmonary function tests. *Id.* at 1. The thrust of Dr. Aris's Supplemental

Report is 1) that lung damage from a toxic gas exposure is an immediate injury and no case reports exist of patients, like Mr. Johnson, slowly getting worse over weeks or months, 2) neither inflammation nor fibrosis was ever found on his CT scan nor did it result in an oxygenation problem; and, 3) there is no "solid evidence" that steroids treat toxic gas exposure and, if steroids did suppress inflammation, then it would not begin again after steroid cessation absent a subsequent toxic inhalation. *Id.* at 3.

**B. Analysis of whether Dr. Aris's opinion is reliable**

Plaintiff attacks Dr. Aris's methodology contending it is unreliable because 1) he has not reviewed or considered certain medical records necessary for making or critiquing a diagnosis, 2) he has not personally examined Johnson, 3) has not familiarized himself with the MBTC level to which Johnson was exposed and 4) has failed to follow his own proffered methodology prior to rendering an opinion on obesity. Additionally, Plaintiff argues that Dr. Aris's diagnosis of obesity is based on speculation and are without support in the medical record.

**1. Failure to review or consider relevant medical records**

Plaintiff criticizes Dr. Aris's failure or refusal to review and consider the September 2010 high-resolution CT scan of Johnson's lungs. At his deposition, Dr. Aris testified that he reviewed PDF printouts of the CT scan rather than the actual images themselves. Exhibit 3 at 41-42 ("Aris depo"), to Plaintiff's Motion to Exclude. Plaintiff contends that Dr. Aris's opinion that the CT scan was normal when based on a review of PDF images as opposed to the actual images is unreliable. Specifically, Plaintiff points out that "Dr. Aris cannot, on the one hand, (1) opine that CT imaging is the primary source for diagnosing interstitial lung disease and pulmonary fibrosis (both diagnoses that Plaintiff's expert has attributed to Johnson), (2) refuse to

review and consider actual CT imaging of Johnson's lungs and, on the other hand, (3) opine that Johnson does not have interstitial lung disease or pulmonary fibrosis.

In response, the Defendant argues that Plaintiff ignores the chronology regarding the 2010 CT scan, which it claims is critical to understanding Dr. Aris' testimony. Defendant provides that Dr. Aris was given a CD containing the actual images from the scan fifteen days before his deposition, but was unable to open the same. At his deposition, Dr. Aris testified that he did review PDFs of the images that were sent to him by Arkema's counsel and that he was able to clearly view the normal resolution images in this manner, and that "they were all normal." Aris depo at 48-49. After his deposition, Dr. Aris received a new CD with the CT scan images which he was able to view using software provided by Dr. Jon Bergstrom, the attending radiologist. Defendant states that his review of the actual images is reflected in his Second Supplemental Report and that his opinion has not changed. See Exhibit M, to Arkema's Response to Plaintiff's Motion to Exclude.

Having considered the above, the Court is of the opinion that the issue set forth above raised in Plaintiff's Motion to Exclude is now moot. Dr. Aris has now reviewed the actual images from the CT scan and issued a supplemental report indicating that his opinion has not changed. As such, there is no issue under *Daubert* requiring further analysis.

## **2. Dr. Aris has not personally examined Johnson**

Plaintiff next argues that Dr. Aris's opinion that the most likely cause of Johnson's lung injury is his morbid obesity and deconditioning is not reliable because he has not personally examined, or even met, Johnson. While it may be an area of cross examination, the Court is unaware of any authority requiring a physician offering an opinion on an issue such as this that

requires the doctor to examine a Plaintiff before his opinion is admissible under *Daubert*. The Court notes that the Plaintiff has not offered any authority to the contrary.

**3. Dr. Aris is not familiar with level of MBTC exposure**

Plaintiff challenges the reliability of Dr. Aris's opinion that "Mr. Johnson did not have evidence for a significant exposure to MBTC" and "there is no evidence of a toxic lung injury due to MBTC and HCL." Plaintiff contends that without knowledge of the level or extent of exposure Johnson experienced, or the level of MBTC exposure which is considered dangerous, Dr. Aris should not be permitted to offer the above opinions.

As was discussed in detail above, there have been no tests on humans regarding either the effects of MBTC exposure nor is there any baseline against which any level of exposure could be measured. In other words, there is no objective data in existence by which a physician can confirm that a patient has been exposed to MBTC and no data as to the level at which MBTC is toxic to humans. Accordingly, there is no scientific basis on which Dr. Aris can base the opinions offered in this section. Therefore, the Court will recommend that Dr. Aris be precluded from testifying that 1) Mr. Johnson did not have evidence of a significant exposure to MBTC, and 2) there is no evidence of toxic lung injury due to MBTC and HCL. The Court is of the opinion that it would be inequitable to hold Drs. Schlesinger and Grodzin to one standard of causation as to MBTC/HCL and Dr. Aris to another. However, this does not mean that Dr. Aris is precluded from testifying as to any other causation opinion based upon a reasonable degree of medical certainty or to the fact that there are no human reports of lung injury attributable to MBTC and other similar testimony.

**4. Dr. Aris failed to follow proffered methodology in rendering his obesity**

**opinion and his opinion is based on speculation**

Plaintiff claims that Dr. Aris did not follow his own proffered methodology for concluding that "obesity" was the "most likely cause" of Johnson's lung condition. Dr. Aris testified that "the only way I know to prove it is if the patient loses weight back down to normal body weight and the condition goes away." Aris depo at 88. Since Dr. Aris has presented no evidence that Johnson has ever returned to his normal body weight or that the restrictive lung condition has gone away, Plaintiff claims Dr. Aris's opinion as to obesity is unreliable in that he did not follow his proffered methodology. Plaintiff also posits that Dr. Aris's opinion is based on "speculation" because they are without support in the medical record. Plaintiff further contends that Dr. Aris admits that obesity cannot cause interstitial lung disease and that he offers an unsupported explanation of Johnson's PFT test results.

Defendant counters by stating that Dr. Aris's opinion is not that obesity is the most likely cause of Johnson's lung disease because Dr. Aris does not believe that the Plaintiff has any lung disease. Defendant states that Dr. Aris's opinion is that the most likely cause of Plaintiff's *shortness of breath* is obesity. Additionally, Defendant argues that Plaintiff's position as to Dr. Aris not following his own proffered methodology is "nonsensical" in that Dr. Aris is well qualified to explain what is known in his profession about the effect of obesity on pulmonary function. Further, Defendant argues that Dr. Aris has good grounds for his opinion based on his interpretation of Plaintiff's medical tests.

The Court has examined Dr. Aris's methodology for his obesity opinion and concludes that it satisfies the *Daubert* criteria. Irrespective of the fact that Dr. Aris did not follow his preferred methodology in reaching his opinion, he still is able to offer an opinion to a reasonable

degree of medical certainty based upon his review of Plaintiff's medical records, medical testing and deposition. Like Dr. Grodzin, Dr. Aris chose to base his opinion on something less than his "gold standard," but that does not make it unreliable. In that the Court permitted Dr. Grodzin's diagnostic opinion when he did not follow his proffered methodology, the Court likewise will allow Dr. Aris's obesity opinion because he too had an alternative, reliable methodology on which to base his opinion. While Plaintiff encourages this Court to strike Dr. Aris's opinion because his opinions are contradictory, are contrary to Johnson's treating physicians, ignores objective medical test results, and his testimony is "confounding," the undersigned is of the opinion that such objections go to the weight to be accorded to Dr. Aris's testimony and not its admissibility. Accordingly, the Court recommends that Plaintiffs Motion to Exclude be denied in part and granted in part and that Dr. Aris be permitted to testify except as limited above.

#### **IV. Recommendation**

##### **IT IS RESPECTFULLY RECOMMENDED that:**

1. Arkema Inc.'s Motion to Preclude the Opinions and Testimony of Richard B. Schlesinger, Ph.D. (Docket Entry No. 102), be **GRANTED** and that Dr. Schlesinger be **EXCLUDED** from testifying in this matter.
2. Arkema Inc.'s Motion in Limine to Preclude the Opinions and Testimony of Charles J. Grodzin, M.D. (Docket Entry No. 95) be **DENIED in part** and **GRANTED in part**. Specifically, the undersigned recommends that the Motion be denied in part and that Dr. Grodzin be permitted to testify as to the nature and extent of Plaintiff's medical condition. The undersigned recommends that the Motion be granted in part and that Dr. Grodzin be

**EXCLUDED** from testifying as to a causation opinion in this matter.

3. Plaintiff's Motion to Exclude Dr. Robert Aris (Docket Entry No. 103) be **DENIED in part** and **GRANTED in part**. Specifically, the undersigned recommends that the Motion be denied in part and that Dr. Aris be permitted to testify as the nature and extent of Plaintiff's medical condition. Dr. Aris should further be permitted to testify that Plaintiff's shortness of breath is caused by his obesity and deconditioning. The undersigned recommends that the Motion be granted in part and that Dr. Aris be **EXCLUDED** from testifying that 1) Mr. Johnson did not have evidence of a significant exposure to MBTC, and 2) there is no evidence of toxic lung injury due to MBTC and HCL.

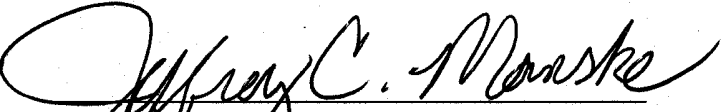
The parties may wish to file objections to this Report and Recommendation. A party filing objections must specifically identify those findings or recommendations to which objections are being made. The District Court need not consider frivolous, conclusive, or general objections. *See Battle v. United States Parole Comm'n*, 834 F.2d 419, 421 (5th Cir. 1987).

A party's failure to file written objections to the proposed findings and recommendations contained in this Report within fourteen (14) days after the party is served with a copy of the Report shall bar that party from de novo review by the District Court of the proposed findings and recommendations in the Report and, except upon grounds of plain error, shall bar the party from appellate review of unobjected-to proposed factual findings and legal conclusions accepted by the District Court. *See* 28 U.S.C. § 636(b)(1)(C); *Thomas v Arn*, 474 U.S. 140, 150-53 (1985); *Douglass v. United Services Automobile Association*, 79 F.3d 1415 (5th Cir. 1996) (en banc). To the extent that a party has not been electronically served by the Clerk with this Report and Recommendation pursuant to the CM/ECF procedures of this District, the Clerk is directed



to mail such party a copy of this Report and Recommendation by certified mail, return receipt requested.

SIGNED on this the 16th day of December, 2010.

  
JEFFREY C. MANSKE  
UNITED STATES MAGISTRATE JUDGE